**24 CHANNELS**
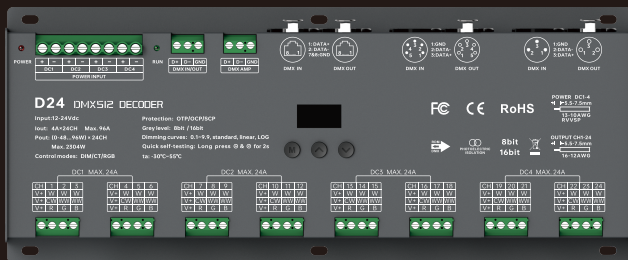
OLED display
8 bit / 16 bit
4 kinds of DMX interfaces
Dimming curve: 0.1~9.9
Short circuit / Over current / Overheat protection

# D24

# DMX512 DECODER



**D24** DMX512 DECODER

POWER    DC1    DC2    DC3    DC4    RUN    DMX IN/OUT    DMX AMP    DMX IN    DMX OUT    DMX IN    DMX OUT    DMX IN    DMX OUT

POWER INPUT

Input:12-24Vdc
Iout: 4A×24CH    Max. 96A
Pout: (0-48...96W) × 24CH
Max. 2304W
Control modes: DIM/CT/RGB

Protection: OTP/OCP/SCP
Grey level: 8bit / 16bit
Dimming curves: 0.1~9.9, standard, linear, LOG
Quick self-testing: Long press ① & ② for 2s
ta: -30°C~50°C

FC    CE    RoHS

8bit
16bit

POWER  DC1-4
1.5-7.5mm²
12-10AWG
RVVSP

OUTPUT CH1-24
5.3-7.5mm²
16-12AWG

DC1 MAX. 24A    DC2 MAX. 24A    DC3 MAX. 24A    DC4 MAX. 24A

**RDM DMX**    FC    CE    RoHS    Photoelectric isolation    5-year warranty

# Product introduction

1. Designed for Hi-power multiple channels application, 24 channels output, and Max. 4A current per channel, up to 2304W output power.

2. Easy operation with OLED screen and touch buttons.

3. 3 kinds of modes available: DIM, CT, RGB.

4. 3-pin XLR, 5-pin XLR, RJ45 and green terminal DMX interface with photoelectric isolation, improve signal transmission efficiency and anti-interference ability, the green terminal also has signal amplifier function.

5. With RDM remote management protocol, the operations can be completed via the RDM master console, such as parameters browsing & settings, DMX address settings, equipment recognition, etc.

6. With firmware upgrade function.

7. With short circuit, over current and over temp. protection, as well as warning function when a fault occurs.

8. With power-on state management and fast self-testing function.

9. 16bit (65536 levels) / 8bit (256 levels) grey level available.

10.  Available for standard, linear, LOG or custom 0.1-9.9 dimming curve.
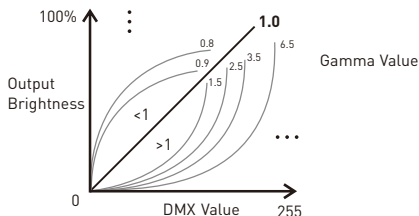




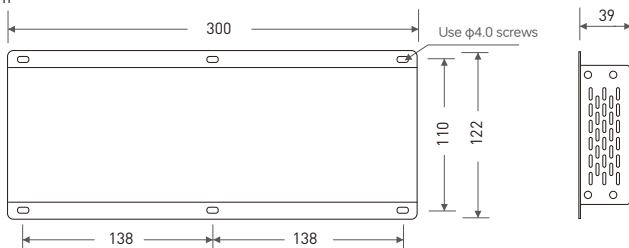| 3-pin XLR | 5-pin XLR | RJ45 | RDM | Photoelectric isolation | Short circuit protection | Overheat protection | Over current protection | Display |

# Technical specs

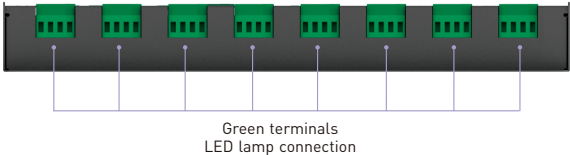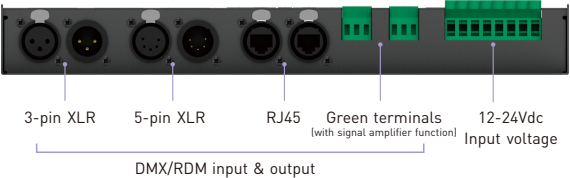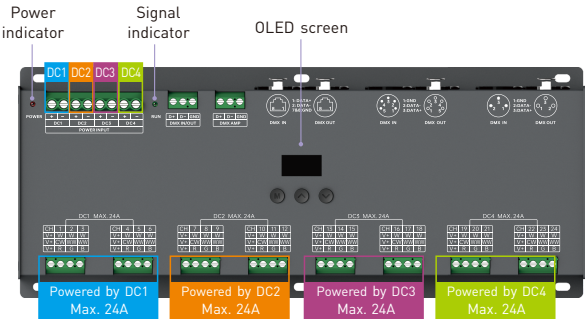| | |
|---|---|
| Model : | D24 |
| Input signal : | DMX512/RDM |
| Input voltage : | 12~24Vdc |
| Current load : | 4A × 24CH   Max. 96A |
| Output power : | (0~48W...96W) × 24CH  Max. 2304W |
| DMX interfaces : | 3-pin XLR, 5-pin XLR, RJ45, Green terminal |
| Control modes : | DIM/CT/RGB |
| Dimming curves : | 0.1~9.9, standard, linear, LOG |
| Grey level : | 8bit (256 levels) / 16bit (65536 levels) |
| Photoelectric isolation : | Yes |
| Protection : | Short circuit / Overheat / Over current protection, recover automatically. |
| Working temperature : | -30°C~55°C |
| Dimensions : | 300×122×39mm(L×W×H) |
| Package size : | 313×127×41mm(L×W×H) |
| Weight (G.W.) : | 1180g |

RDM DMX  FC  CE  RoHS  5-Year Warranty

# Product size

Unit: mm



300

Use φ4.0 screws

39

110

122

138    138

# Main component description



Power indicator

Signal indicator

OLED screen

DC1 DC2 DC3 DC4

Powered by DC1 Max. 24A

Powered by DC2 Max. 24A

Powered by DC3 Max. 24A

Powered by DC4 Max. 24A



3-pin XLR    5-pin XLR    RJ45    Green terminals (with signal amplifier function)    12-24Vdc Input voltage

DMX/RDM input & output



Green terminals
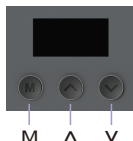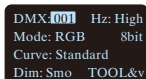LED lamp connection

# OLED screen interface

Press "M" key, switch entries.
Long press "M" key, back to main page.
Press "∧" or "∨" key, parameter adjustment.

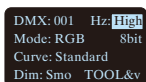Exit: back to previous page.

**M ∧ ∨**

1. DMX address settings

DMX: 001   Hz: High
Mode: RGB      8bit
Curve: Standard
Dim: Smo   TOOL&v

Main page

Press "∧" or "∨" key to set DMX address.

Range: 001~512

2. PWM frequency

DMX: 001   Hz: High
Mode: RGB      8bit
Curve: Standard
Dim: Smo   TOOL&v

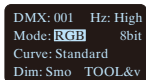Press "∧" or "∨" key to choose.
Available :

No flicker in video camera.

Std (standard)
High
Mid (middle)
Low

Smooth and exquisite, human eye is comfortable.

✳ It is recommended to use standard.

3. Modes

DMX: 001   Hz: High
Mode: RGB      8bit
Curve: Standard
Dim: Smo   TOOL&v

Press "∧" or "∨" key to choose.

Available : DIM
CT/CT2
RGB

4. Grey scale

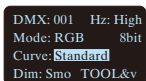DMX: 001   Hz: High
Mode: RGB      8bit
Curve: Standard
Dim: Smo   TOOL&v

Press "∧" or "∨" key to choose.

Available : 8bit
16bit (choose it if the master controller supports this function)

5. Dimming curves

DMX: 001   Hz: High
Mode: RGB      8bit
Curve: Standard
Dim: Smo   TOOL&v

Press "∧" or "∨" key to choose.

Available : Standard
Linear
LOG
0.1~9.9
It is recommended to use standard,
0.1~9.9 is for special requirements.

**6. Enhance dimming**

DMX: 001   Hz: High
Mode: RGB        8bit
Curve: Standard
Dim:Smo     TOOL&v

Press "∧" or "∨" key to choose.

Available : Std (standard)
              Smo (smooth)
        ✳ It is recommended to use standard.

Smo:  This option with smooth processing, realizes
      flicker-free dimming and smooth dynamic effects.

**7. Tool**

DMX: 001   Hz: High
Mode: RGB        8bit
Curve: Standard
Dim: Smo   TOOL&v

Press "∧" or "∨"
key to enter submenu.

Screen: ON+Addr
Contrast: 40%
Beep: ON      TEST&v
              EXIT&v

Press "∧" or "∨"
key to enter
submenu of test.

CH01: 255
CH02: 255
CH03: 255  [∧&V]
           EXIT &V

Brightness setting
(range: 0–255)
Press"∧" or "∨"
to next page.
Press"∨" to exit.

ALL: 255
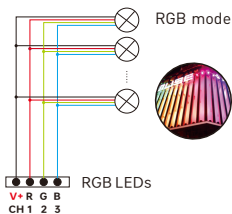
           [∧&V]
           EXIT &V

Change all value
simultaneously.
(on the last page)

## 001

**Screen: ON+Addr**
Screensaver open and display address
without operating in two minutes .

**Screen: ON+black**
Screensaver open and black without
operating in two minutes .

DMX: 001   Hz: High
Mode: RGB        8bit
Curve: Standard
Dim: Smo   TOOL&v

**Screen: OFF**
Screensaver not enable.

Fast self-testing function: press "∧"or "∨" keys
simultaneously for 2-3 seconds under any page,
decoder will enter self-testing function.

# Wiring diagram

## 1. Connecting LED lights:

LED driver

LED driver

LED driver

LED driver

DMX/RDM signal   DMX/RDM signal

Power to 1, 2 LEDs
Power to 3, 4 LEDs
Power to 5, 6 LEDs
Power to 7, 8 LEDs

**D24**

1   2   3   4   5   6   7   8

LED light

Dimming mode

Dimming LEDs

V+ R  G  B
CH 1  2  3

Color temperature mode

CT/CT2 LEDs

V+ R  G  B
CH 1  2  3

RGB mode

RGB LEDs

V+ R  G  B
CH 1  2  3
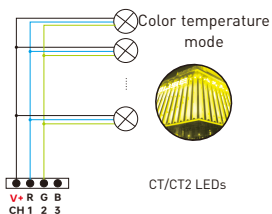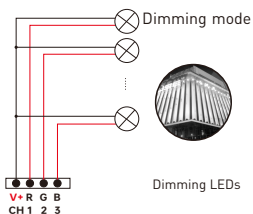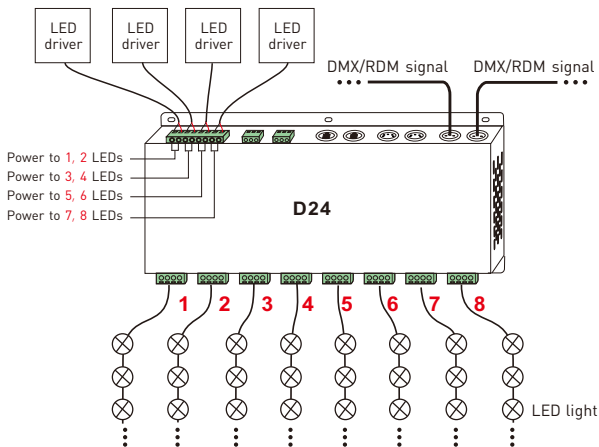
## 2. DMX console connection:
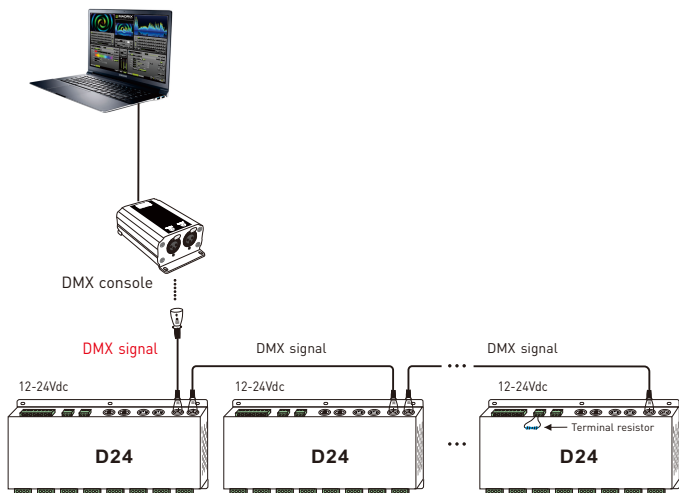
D24 is equipped with 3 kinds of DMX terminals for users' selection. The following diagram takes 3-pin XLRas an example, same connecting method for the rest three: RJ45 & 5-pin XLR & green terminal (with amplifier function).



DMX console

DMX signal    DMX signal    DMX signal

12-24Vdc    12-24Vdc    12-24Vdc

Terminal resistor

**D24**    **D24**    **D24**

If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each line.

3. The connection diagram of 4 kinds of DMX/RDM terminals:



5-pin XLR connected in parallel

3-pin XLR connected in parallel

Green terminal connected in parallel

RJ45 connected in parallel

Resistor terminal

Vent

Installation distance > 20mm
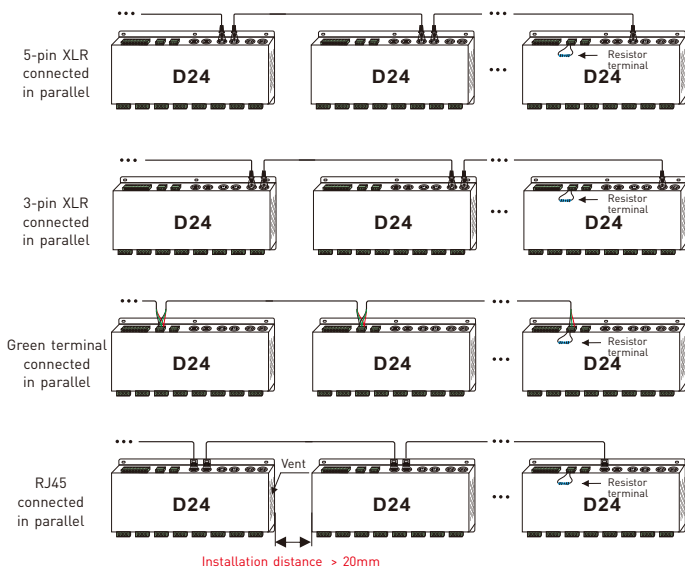
These 4 terminals can be connected in a mixed way.

**Installation attentions:** Please reserve enough ventilation distance between decoders (>20mm), be sure not to block the vent, or it will affect lifetime of decoder for poor heat dissipation.

4. The connection diagram of AMP signal amplifier terminal:

Connecting with green terminal or an extra amplifier will be needed when more than 32 decoders are connected or use overlong signal wire (as shown below).
Signal amplifier should not be more than 5 times continuously.



Resistor terminal        AMP        Resistor terminal
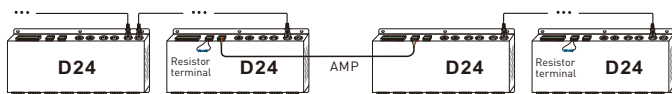
# Address setting table

| Mode | DIM | CT/CT2 | RGB |
|------|-----|--------|-----|
| Address quantity | 8 | 16 | 24 |
| Resolution | 8bit | 8bit | 8bit |
| Channel 1 | 001 | 001 | 001 |
| Channel 2 | 001 | 002 | 002 |
| Channel 3 | 001 | 002 | 003 |
| Channel 4 | 002 | 003 | 004 |
| Channel 5 | 002 | 004 | 005 |
| Channel 6 | 002 | 004 | 006 |
| Channel 7 | 003 | 005 | 007 |
| Channel 8 | 003 | 006 | 008 |
| Channel 9 | 003 | 006 | 009 |
| Channel 10 | 004 | 007 | 010 |
| Channel 11 | 004 | 008 | 011 |
| Channel 12 | 004 | 008 | 012 |
| Channel 13 | 005 | 009 | 013 |
| Channel 14 | 005 | 010 | 014 |
| Channel 15 | 005 | 010 | 015 |
| Channel 16 | 006 | 011 | 016 |
| Channel 17 | 006 | 012 | 017 |
| Channel 18 | 006 | 012 | 018 |
| Channel 19 | 007 | 013 | 019 |
| Channel 20 | 007 | 014 | 020 |
| Channel 21 | 007 | 014 | 021 |
| Channel 22 | 008 | 015 | 022 |
| Channel 23 | 008 | 016 | 023 |
| Channel 24 | 008 | 016 | 024 |

| Mode | DIM | CT/CT2 | RGB |
|------|-----|--------|-----|
| Address quantity | 16 | 32 | 48 |
| Resolution | 16bit | 16bit | 16bit |
| Channel 1 | 001 002 | 001 002 | 001 002 |
| Channel 2 | 001 002 | 003 004 | 003 004 |
| Channel 3 | 001 002 | 003 004 | 005 006 |
| Channel 4 | 003 004 | 005 006 | 007 008 |
| Channel 5 | 003 004 | 007 008 | 009 010 |
| Channel 6 | 003 004 | 007 008 | 011 012 |
| Channel 7 | 005 006 | 009 010 | 013 014 |
| Channel 8 | 005 006 | 011 012 | 015 016 |
| Channel 9 | 005 006 | 011 012 | 017 018 |
| Channel 10 | 007 008 | 013 014 | 019 020 |
| Channel 11 | 007 008 | 015 016 | 021 022 |
| Channel 12 | 007 008 | 015 016 | 023 024 |
| Channel 13 | 009 010 | 017 018 | 025 026 |
| Channel 14 | 009 010 | 019 020 | 027 028 |
| Channel 15 | 009 010 | 019 020 | 029 030 |
| Channel 16 | 011 012 | 021 022 | 031 032 |
| Channel 17 | 011 012 | 023 024 | 033 034 |
| Channel 18 | 011 012 | 023 024 | 035 036 |
| Channel 19 | 013 014 | 025 026 | 037 038 |
| Channel 20 | 013 014 | 027 028 | 039 040 |
| Channel 21 | 013 014 | 027 028 | 041 042 |
| Channel 22 | 015 016 | 029 030 | 043 044 |
| Channel 23 | 015 016 | 031 032 | 045 046 |
| Channel 24 | 015 016 | 031 032 | 047 048 |

When you select CT2, the DMX address represents brightness , color temperature and constant power output respectively.

9

# Work with RDM editor

D24 can work with LTECH RDM editor (Model: WiFi-RDM01) to realize changing the parameters by long-range setting, wiring diagram as below:
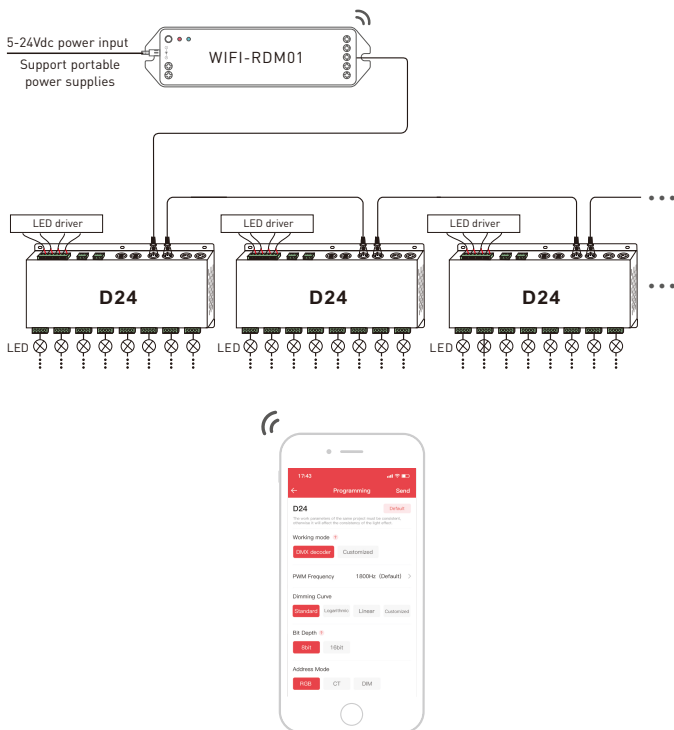
# RDM editor App interface instruction

Download the App, setting the D24 parameters (frequency, bit, curve, modes, dimming range, screensaver, etc.) after well connecting the RDM editor, more details, please check the manual of WiFi-RDM01.

Well installation of products first, then working with WiFi -RDM01 to realize setting parameters and firmware upgrade by App.



WiFi-RDM01 upgrade

DMX device upgrade
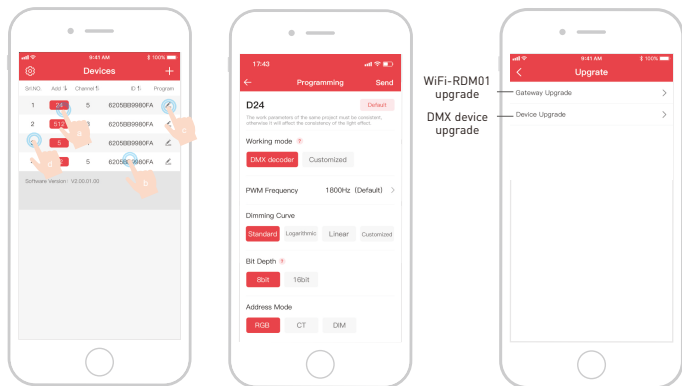
a: Click"Add", edit the address in corresponding box.
b: Click"ID", get more product details.
c: Click" ✎ ", enter edited interface.
d: Click"No.",  issue the recognizing command.

Supporting WiFi-RDM01 upgrade and DMX driver upgrade.

# Attention

- Product installation and commissioning should be done by a qualified professional.
- Our company products are and not lightningproof non-waterproof(special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a waterproof enclosure or in an area equipped with lightning protection devices.
- Good heat dissipation will prolong the working life of products. Please ensure good ventilation.
- Please check if the working voltage used complies with the parameter requirements of products.
- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.
- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.
- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

# Warranty Agreement

- Warranty periods from the date of delivery: 5 years.
- Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:
Following conditions are not within the guarantee range of free repairing or replacement services:

- Beyond warranty periods.
- Any artificial damage caused by high voltage, overload, or improper operations.
- Products with severe physical damage.
- Damage caused by natural disasters and force majeure.
- Warranty labels and barcodes have been damaged.
- No any contract signed by our company.

1. Repair or replacement provided is the only remedy for customers. Our company is not liable for any incidental or consequential damage unless it is within the law.
2. Our company has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.

＊ This manual is subject to changes without further notice. Product functions depend on the goods. Please feel free to contact our official distributors if you have any question.